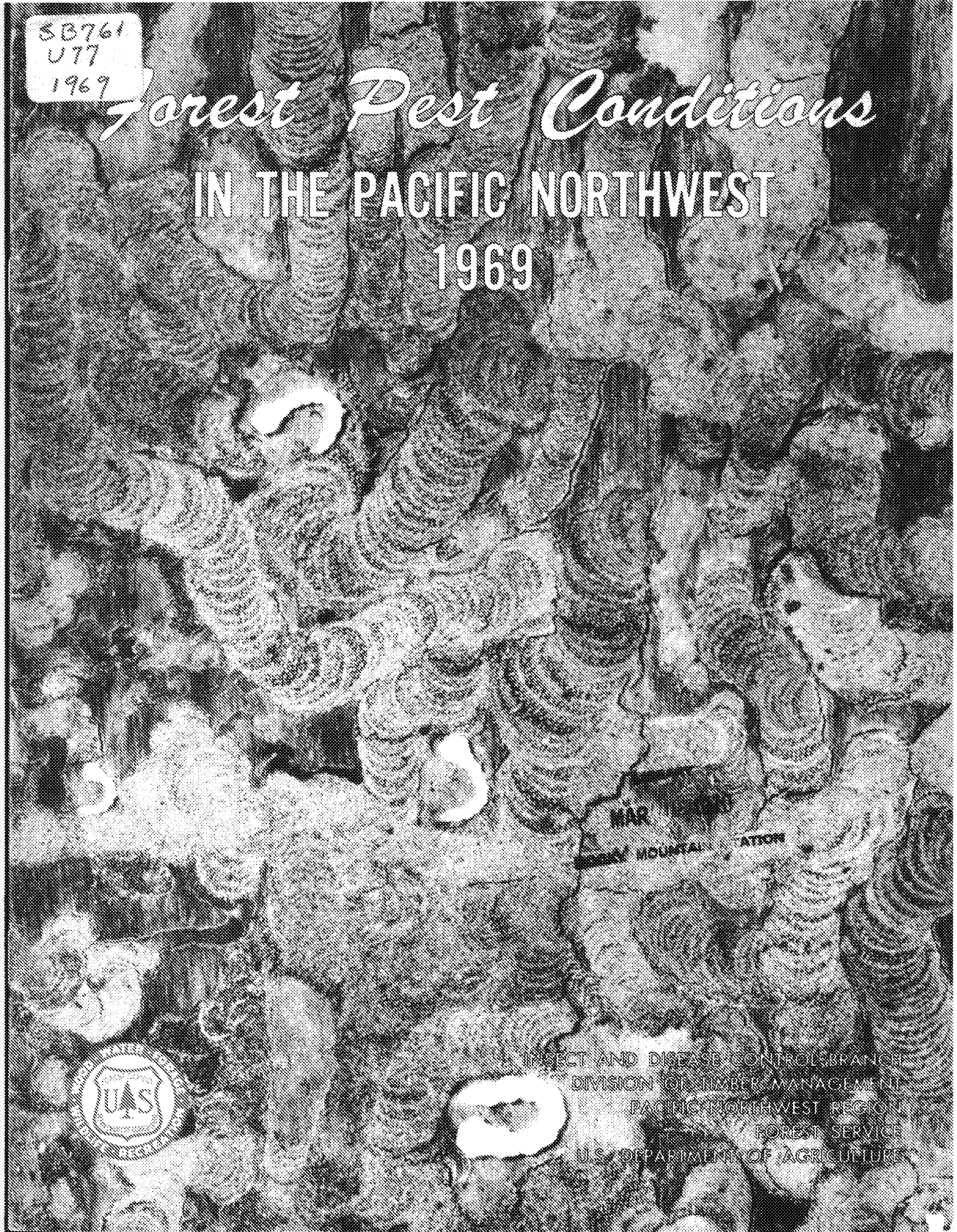
SB761
U77
1969

Forest Pest Conditions IN THE PACIFIC NORTHWEST 1969



INSECT AND DISEASE CONTROL BRANCH
DIVISION OF TIMBER MANAGEMENT
PACIFIC NORTHWEST REGION
FOREST SERVICE
U.S. DEPARTMENT OF AGRICULTURE

This is the 22nd annual report of forest pest conditions in Oregon and Washington based on cooperative surveys sponsored by the Northwest Forest Pest Action Council. The combined efforts of many organizations and individuals made these surveys possible. Special acknowledgment is made to the principal cooperators, Oregon State Department of Forestry and Washington State Department of Natural Resources.

COVER BACKGROUND: Larvae and larval galleries of the flatheaded fir borer (*Melanophila drummondi* Kby.)

FOREST PEST CONDITIONS IN THE PACIFIC NORTHWEST

1969

BY

R. E. DOLPH

AND

L. F. PETTINGER

DECEMBER 1969

INSECT AND DISEASE CONTROL BRANCH
DIVISION OF TIMBER MANAGEMENT
PACIFIC NORTHWEST REGION
FOREST SERVICE
U.S. DEPARTMENT OF AGRICULTURE

TABLE OF CONTENTS

	Page
INTRODUCTION	1
CONDITIONS IN BRIEF	1
Table 1.—Summary of forest insect infestations in Oregon and Washington during 1968 and 1969	2
MAJOR DEFOLIATOR PROBLEMS	3
Larch casebearer	3
Figure 1.—Larvae of larch casebearer feeding on larch in northeast Washington	3
Western hemlock looper	4
Figure 2.—Surveillance of aquatic invertebrates on the hemlock looper spray project	4
Figure 3.—A sample of aquatic invertebrates	4
Needle miners	5
Figure 4.—A needle miner feeding within a lodgepole needle in central Oregon	5
Figure 5.—A needle miner crawling on a lodgepole pine needle in central Oregon	5
European pine shoot moth	5
Larch budmoth	5
MAJOR SUCKING INSECT PROBLEMS	6
Balsam woolly aphid	6
Spruce aphid	6
MAJOR BARK BEETLE PROBLEMS	6
Douglas-fir beetle	6
Engelmann spruce beetle	6
Fir engraver	7
Mountain pine beetle	7
Western pine beetle	7
Oregon pine ips	7
Silver fir beetles	7
Table 2.—Summary of 1969 infestations in Oregon and Washington for all bark beetle damage excluding Oregon pine ips	8
MINOR FOREST PEST PROBLEMS	8
Ponderosa pine terminal feeders	8
Grasshoppers	8
Sawflies	9
Needle cast disease of pines	9
Poria root rot	9
Winter damage	9
A scolytid beetle	9
Black-headed budworm	9
Dying hemlock	9
Trees damaged by bears	9
OTHER INSECT PROBLEMS	10
Western tent caterpillar	10
Fall webworm	10
Omnivorous leaf tier	10
A plant bug	10
Pine needle scale	10
Satin moth	10
A pine needle-sheath miner	10
Smaller European elm bark beetle	10
Pine weevils	10
A scale insect	10
A pine-webbing sawfly	10
FOREST INSECT REPORTING AREAS (Figure 6)	back cover

INTRODUCTION

Forest pest infestations were detected and recorded by aerial and ground surveys in cooperation with the Washington State Department of Natural Resources and the Oregon State Department of Forestry. Ground surveys were made to verify aerial survey findings, detect low-level populations, and evaluate conditions and trends.

This year bark beetle losses, except for Oregon pine ips, are expressed by volume rather than by intensity of damage. With the increasing demand for more intensive forest management practices, volume estimates provide the information needed by the land owners and managers for the salvage and control of insect outbreaks.

Oregon pine ips, defoliators, and sucking insects are reported by infested acreage and intensity of damage. No attempt was made to estimate the volume loss caused by these insects, which may well equal or exceed the estimated loss attributed to the bark beetles.

Timber losses due to dying hemlock, bears, storms, and some diseases are also reported here.

The aerial survey for larch casebearer damage was not made this year, not because of lack of a problem, but because practically all larch stands in northeast Washington are now infested. Ground surveys were made, however, to determine extent of spread and to evaluate the damage.

CONDITIONS IN BRIEF

Outbreaks of forest insects were generally lower in Oregon and Washington during 1969. Bark beetles were again the most destructive — killing an estimated volume of 548 million board feet.

The trend of insect infestations in Oregon and Washington during the past decade is shown in the following table. It must be noted that the reduction of infested acreage from 1968 to 1969 is due in a large part to the exclusion of acreage infested by the larch casebearer.

Year	Infested acreage	Year	Infested acreage
1960	1,272,960	1965	1,402,610
1961	1,223,230	1966	1,220,710
1962	1,305,170	1967	1,910,900
1963	1,311,080	1968	2,976,880
1964	1,116,130	1969	1,234,150

Survey findings for 1969 and the expectations for next year are as follows:

1. *Douglas-fir beetle.*—Outbreaks were generally lower in the Region. Major problems were in localized areas. In 1970 the trend should continue downward, with problems in limited areas.
2. *Engelmann spruce beetle.*—Outbreaks increased in Washington and decreased in Oregon. Little change is expected next year.
3. *Fir engraver.*—Heavy tree mortality occurred in the eastern portion of both States. The problem should decrease next year.
4. *Mountain pine beetle.*—Losses continued on several areas in Oregon and Washington. The trend of damage will vary by host tree attacked.
5. *Oregon pine ips.*—Outbreaks were well below those reported the past several years. Next year outbreaks are expected to return to normal.
6. *Western pine beetle.*—Losses were low. Most damage occurred in southern Oregon. The trend for next year is undetermined.
7. *Silver fir beetles.*—Losses were again low and are expected to remain low next year.
8. *Larch budmoth.*—Infested acreage increased in 1969 but is expected to be lower next year. All outbreaks were in Washington.

9. *Sawflies on knobcone pine.*—Damage occurred on several thousand acres in southwest Oregon. The infestation will probably be lower next year.
10. *Western hemlock looper.*—The current cycle of high looper population on the Mt. Baker National Forest in Washington appears to be declining. Next year little defoliation is expected.
11. *Needle miners.*—Outbreaks on ponderosa pine have subsided completely and were greatly reduced on lodgepole pine. The downward trend is expected to continue next year.
12. *Larch casebearer.*—The outbreak continues to spread in eastern Washington. It will probably reach northeast Oregon soon.
13. *Balsam woolly aphid.*—Outbreaks continued high in both States along with the discovery of the aphid on the Olympic Peninsula in Washington. The problem will continue next year.
14. *European pine shoot moth.*—The problem continued in the known infested cities of Oregon and new infestations were found in western Washington. The problems for next year are unpredictable but can be expected to continue.

Table 1.—Summary of forest insect infestations in Oregon and Washington during 1968 and 1969
(In Acres)

Insects[1]	Oregon		Washington		Regional total	
	1968	1969	1968	1968	1968	1969
Bark beetles:						
Douglas-fir beetle (westside)	200,790	20,120	37,950	39,970	238,740	59,190
Douglas-fir beetle (eastside)	4,570	14,220	12,460	42,070	17,030	56,290
Engelmann spruce beetle	5,570	1,280	980	24,660	6,550	25,940
Fir engraver	287,940	316,920	27,920	41,150	315,860	358,070
Mountain pine beetle (L)	203,980	184,210	6,240	1,990	210,220	186,200
Mountain pine beetle (S)	570	40	0	0	570	40
Mountain pine beetle (W)	78,896	101,360	43,650	48,040	122,540	149,400
Mountain pine beetle (P)	50,820	55,640	22,970	12,930	73,790	68,570
Oregon pine ips	68,750	21,780	3,590	110	72,340	21,890
Western pine beetle	174,160	45,250	33,810	14,250	207,970	59,500
Silver fir beetles	0	0	5,330	5,010	5,330	5,010
Douglas-fir engraver	5,140	0	0	0	5,140	0
All bark beetles	1,081,180	760,820	194,900	229,280	1,276,080	990,100
Defoliators:						
Larch budmoth	0	0	4,060	12,160	4,060	12,160
Sawflies on true firs	750	0	0	0	750	0
Larch sawfly	7,010	0	3,240	0	10,250	0
Sawflies on knobcone pine	0	7,690	0	0	0	7,690
Western hemlock looper	0	0	3,160	750	3,160	750
Needle miners (L)	114,280	70,500	0	0	114,280	70,500
Needle miners (P)	5,920	0	0	0	5,920	0
Larch casebearer	0	0	1,392,620	No survey	1,392,620	No survey
All defoliators	127,960	78,190	1,403,080	12,910	1,531,040	91,100
Sucking insects:						
Balsam woolly aphid	138,830	128,130	30,930	24,540	169,760	152,670
Spruce aphid	0	0	0	280	0	280
All sucking insects	138,830	128,130	30,930	24,820	169,760	152,950
All insects	1,347,970	967,140	1,628,910	267,010	2,976,880	1,234,150

[1] Mountain pine beetle and needle miner infestations are separated by tree species: L, lodgepole pine; S, sugar pine; W, western white pine; P, ponderosa pine.

MAJOR DEFOLIATOR PROBLEMS

LARCH CASEBEARER, *Coleophora laricella* (Hübner)

Since its first discovery near Spokane, Washington in 1960, the casebearer has now spread to most larch stands in Spokane, Pend Oreille, Stevens, and Ferry Counties. In addition, many of the larch stands in eastern Okanogan County are also infested. The casebearer has not been found in Oregon, although it has been present for the last 3 years within a few miles of the State line in Asotin and Garfield Counties in southeast Washington.

No aerial survey was made to determine the extent or intensity of damage during 1969. However, ground surveys indicate the population level and resulting damage was much lower this year. The reduction was probably a result of extreme weather conditions during the summer of 1967 and the winter of 1968-69.

Release of the parasite *Agathis pumila* (Ratz.) was made at six sites on the Okanogan National Forest. Parasites have now been released at 30 sites in northeast Washington since 1966. Establishment and spread of the parasite, as determined by surveys, has not been as successful as had been hoped for.

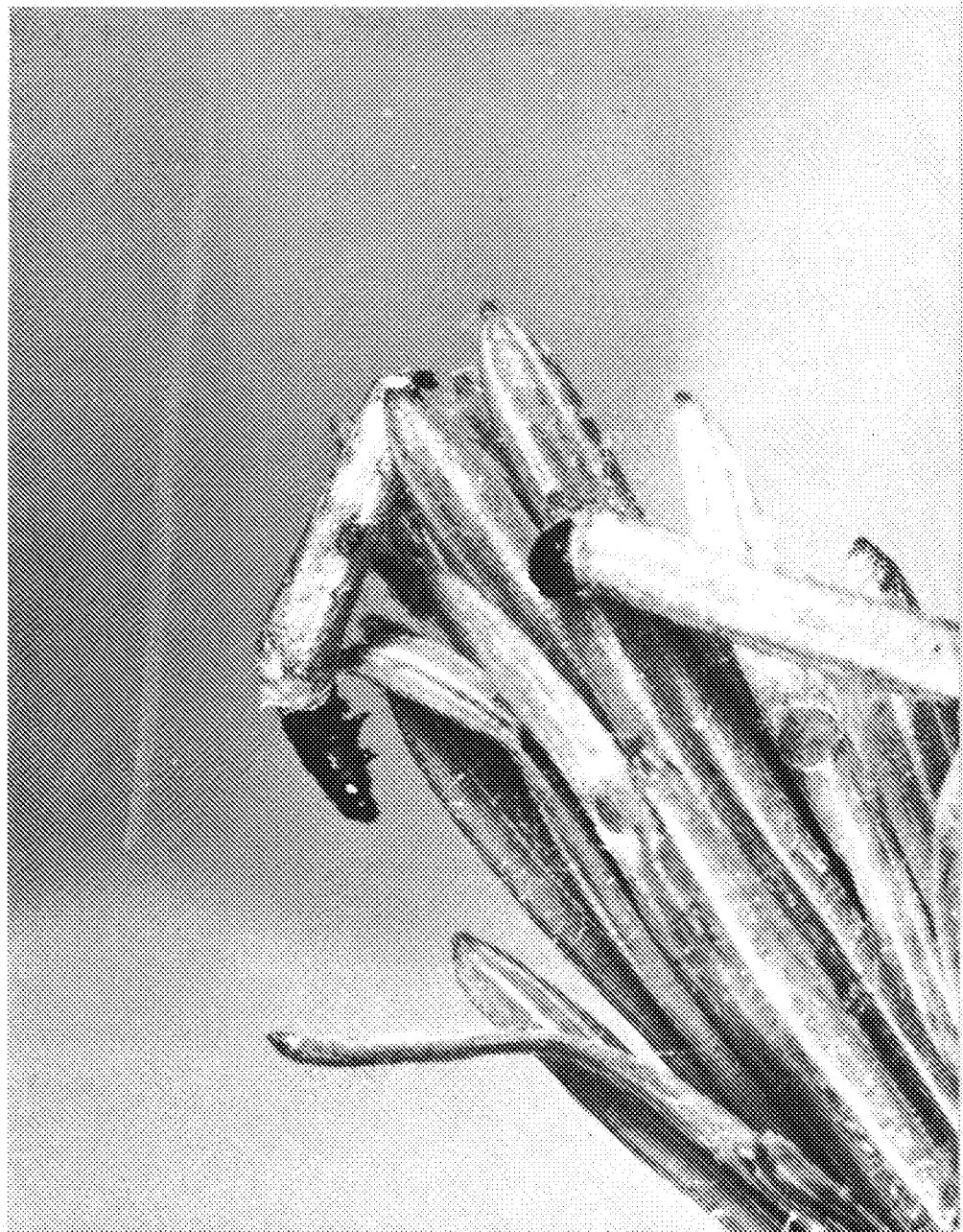


Figure 1.—Larvae of larch casebearer feeding on larch in northeast Washington.

Figure 2.—Surveillance of aquatic invertebrates on the hemlock looper spray project.

WESTERN HEMLOCK LOOPER,

Lambdina fiscellaria lugubrosa Hulst.

Outbreaks on the Mt. Baker National Forest in Washington continued but at a much lower intensity and extent than last year. Late summer surveys showed that over 50 percent of the larvae were parasitized by a tachinid fly.

During July, in cooperation with the Kenya Pyrethrum Company and the Pacific Northwest Forest and Range Experiment Station, stabilized pyrethrins were tested against the looper on 145 acres in the upper Cascade River drainage. Pyrethrins were applied at the rate of 0.1 pounds per acre by helicopter. Results of the test were encouraging — the stabilized pyrethrins may be a suitable means of controlling hemlock looper. Larval population counts before and after spraying on understory trees and shrubs showed a 63 percent population reduction in the sprayed area, while in an unsprayed check area the populations on the understory vegetation increased by 12 percent.

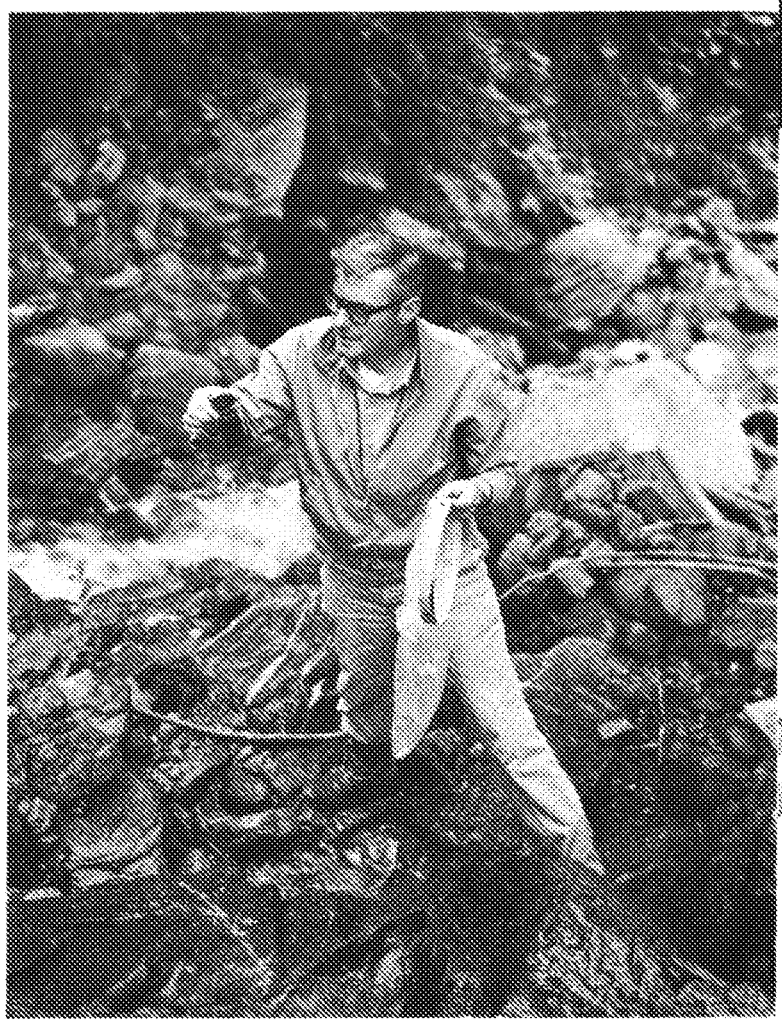


Figure 3.—A sample of aquatic invertebrates.

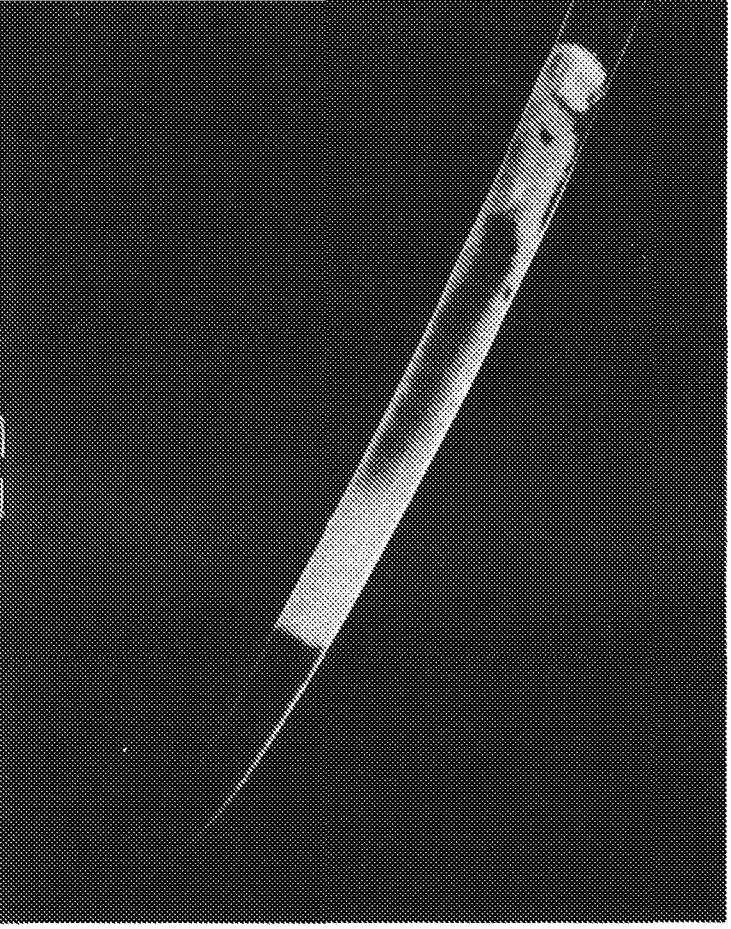


Figure 4.—A needle miner feeding within a lodgepole needle in central Oregon

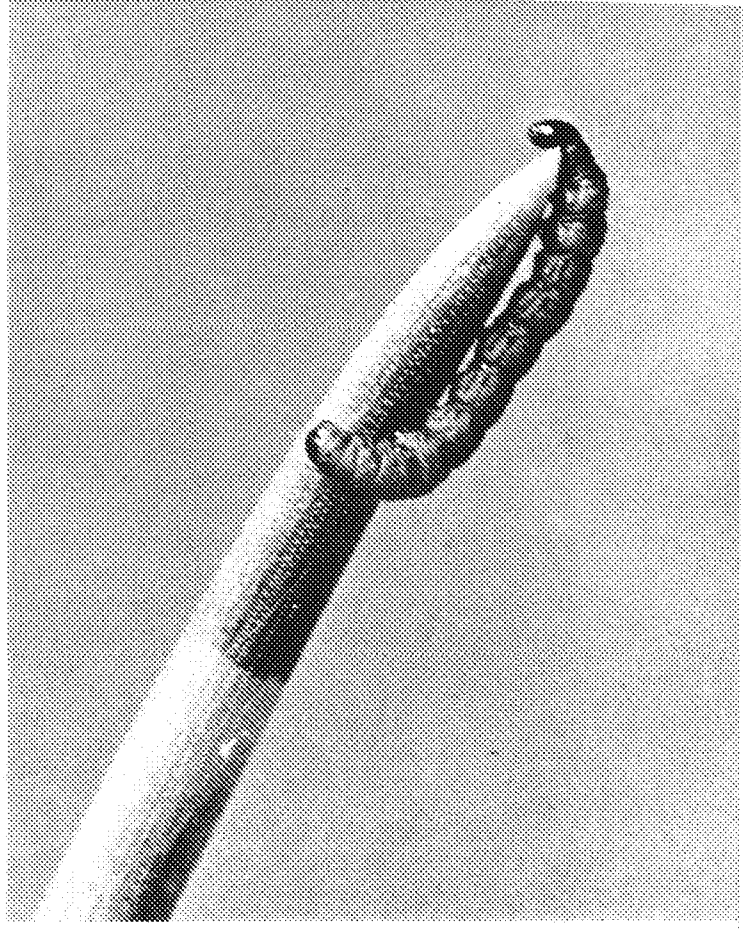


Figure 5.—A needle miner crawling on a lodgepole pine needle in central Oregon.

NEEDLE MINERS, *Coleotechnites* near *milleri.*

Defoliation of lodgepole pine continued in the upper Deschutes and Klamath Basins in central Oregon. However, there has been a significant reduction in extent and intensity for the past year and population is expected to continue downward next year.

The population damaging ponderosa pine for the past 3 years has dropped to endemic levels.

EUROPEAN PINE SHOOT MOTH, *Rhyacionia buoliana* (Schiff.)

No new infestations were found in Oregon outside the known infested communities of Portland, McNary Dam, Umatilla, and Hermiston. A shipment of ornamental pines containing infested material from Washington was intercepted and destroyed at Milton-Freewater, Oregon. In Washington new infestations were found at Vancouver and Centralia.

Infested trees found outside the known infestation zones in Portland, Oregon were sprayed and/or destroyed to control the moth. At College Place, Washington several infested ornamental pines were destroyed.

LARCH BUDMOTH, *Zieraphera improbana* (Walker)

Larch was defoliated for the second year on the Snoqualmie and Wenatchee National Forests in Washington. Infested acreage remained little changed on the Wenatchee National Forest but increased substantially on the Snoqualmie National Forest.

MAJOR SUCKING INSECT PROBLEMS

BALSAM WOOLLY APHID, *Adelges piceae* (Ratz.)

Widespread losses of true firs continued throughout the Cascade Range in Oregon and Washington. Overall losses were only slightly less than those of last year. The aphid was discovered for the first time on the Olympic Peninsula northwest of Hoodsport, Washington. The known infestation zone is small but will probably spread rapidly. Tree mortality has occurred to the subalpine fir. Pacific silver fir, so far, has sustained some top killing.

Elsewhere in Washington most of the damage occurred on the Snoqualmie and Gifford Pinchot National Forests. In Oregon those reporting areas receiving the most damage were the Deschutes, Mt. Hood, Umpqua, and Willamette National Forests.

SPRUCE APHID, *Neomyzaphis abietina* (Wlkr.)

This aphid caused moderate defoliation of Sitka spruce along the southwest Washington Coast. The damage was not widespread and no tree mortality is expected. Outbreaks of this aphid usually decline within a year or two with no tree mortality.

MAJOR BARK BEETLE PROBLEMS

This year the volume of timber killed by all bark beetles, with the exception of Oregon pine ips, was estimated from data recorded during the aerial detection survey. This was done by estimating the number of killed trees in each infestation center and applying an average volume per tree. The average volume varied according to tree species, causal insects, and area. These figures are listed in Table 2.

Volume losses from Oregon pine ips infestations were not estimated because the infestation centers usually involve trees of unmerchantable size. Ips outbreaks are recorded by the damage intensities — light, moderate, or heavy.

DOUGLAS-FIR BEETLE, *Dendroctonus pseudotsugae* Hopk.

Over 121 million board feet of timber on 115,440 acres was killed by this insect in Oregon and Washington in 1969. The volume was divided about equally between eastside and westside Douglas-fir types. In western Washington, the majority of the killing occurred in the Wind River and Lewis River drainages on the Gifford Pinchot National Forest, where some 48 million board feet of mortality resulted on 29,000 acres. Lesser amounts of mortality occurred on the Mt. Baker National Forest and in the Olympic National Park.

In eastern Washington the majority of the damage was on the Okanogan and Colville National Forests where the losses totaled 35 million and 13 million board feet, respectively.

Outbreaks declined in western Oregon. Nearly all of the 3 million board feet of timber killed was on the Mount Hood, Rogue River and Umpqua National Forests.

In eastern Oregon, the beetle had increased its activity. An estimated 6 million board feet of timber was killed, primarily on the Wallowa-Whitman and Umatilla National Forests.

ENGELMANN SPRUCE BEETLE, *Dendroctonus obesus* (Mann.)

Engelmann spruce beetle damage increased greatly in Washington but decreased in Oregon. In Washington, over 20 million board feet of timber was killed on 24,000 acres. Hardest hit areas were found on the Colville, Kaniksu, and Okanogan National Forests and the Colville Indian Reservation. In Oregon, an estimated 540,000 board feet of timber was killed. The heaviest concentrations of this bark beetle occurred on the Wallowa-Whitman National Forest.

FIR ENGRAVER, *Scolytus ventralis* LeC.

This beetle caused widespread tree mortality throughout true fir stands in eastern Oregon and Washington. Results of the 1969 aerial survey showed the fir engraver was active on some 358,000 acres.

In Oregon, over 78 million board feet of timber was killed. Hardest hit were the Wallowa-Whitman and the Umatilla National Forests. The Malheur, Rogue River, Ochoco, and Winema National Forests also received significant losses. In Washington, where 9 million board feet of timber was killed, most of the damage was on the Wenatchee and Colville National Forests and Northeast Washington District.

Outbreaks of the fir engraver generally subside when moisture conditions return to normal.

MOUNTAIN PINE BEETLE, *Dendroctonus ponderosae* Hopk.

Losses to this bark beetle were little changed from those of last year.

Damage to western white pine stands in the Cascade Mountains increased slightly in both Oregon and Washington. Losses decreased on the Olympic Peninsula in Washington. In Oregon an estimated 205 million board feet of timber was killed. Most of this mortality occurred on the Willamette, Umpqua and Mt. Hood National Forests. The majority of the 31 million board feet of damage in Washington was concentrated on the Snoqualmie and Wenatchee National Forests.

Regionwide, the total infested acreage in pole-size ponderosa pine stands decreased. Outbreaks in Oregon were widely scattered with a volume loss of 4 million board feet on 55,000 acres. The majority of the infestations were on the Deschutes, Fremont, Wallowa-Whitman and Winema National Forests. In Washington, the damage was more concentrated where the estimated 6 million board feet of timber killed occurred on 12,000 acres. Losses were centered on the Snoqualmie, Okanogan, and Wenatchee National Forests and the Yakima Indian Reservation.

Infestations in lodgepole pine decreased. In Washington, outbreaks occurred on less than 2,000 acres. Volume estimates of losses were under 2 million board feet. The damage was on the Colville and Okanogan National Forests and the Colville and Spokane Indian Reservations. Epidemic losses of lodgepole in Oregon occurred on some 184,000 acres with a volume loss of nearly 5 million board feet. Reporting areas receiving the most damage were the Deschutes, Fremont, Winema, and Wallowa-Whitman National Forests.

WESTERN PINE BEETLE, *Dendroctonus brevicomis* LeC.

Epidemic outbreaks of this bark beetle in mature ponderosa pine stands were lower throughout the Region. Volume estimates from the aerial detection survey reveal a loss of almost 19 million board feet over Oregon and Washington.

Outbreaks in Oregon were widespread with most of the damage on the Fremont, Malheur, and Umatilla National Forests and the Warm Springs Indian Reservation.

In Washington, the most severe outbreaks were on the Colville National Forest, Yakima Indian Reservation, and the Glenwood District.

OREGON PINE IPS, *Ips pini* Say.

Outbreaks of Oregon pine ips caused few problems this year. In Washington light epidemic damage occurred on the Gifford Pinchot National Forest and on the Colville Indian Reservation. In Oregon the damage was scattered in small patches over most of the ponderosa pine areas.

SILVER FIR BEETLES, *Pseudohylesinus* spp.

Epidemic outbreaks of these beetles were little changed from last year. Moderate losses occurred in the Pacific silver fir stands on the Olympic Peninsula where an estimated 147,000 board feet of timber was killed on the Olympic National Forest and an estimated 39,000 board feet was killed on the Olympic National Park. Light losses occurred on the Mt. Baker and Snoqualmie National Forests. No tree killing was noted on any area in Oregon.

Table 2.—Summary of 1969 infestations in Oregon and Washington for all bark beetle damage excluding Oregon pine ips

Insects[1]	Infestation Centers	Area	Trees	Volume[2]	Average Volume
	Number	*Acres*	*Number*	*Board feet*	*Per tree*
Oregon:					
Douglas-fir beetle (westside)	244	20,120	3,173	3,173,000	1,000
Douglas-fir beetle (eastside)	168	14,220	7,710	6,168,000	800
Engelmann spruce beetle	13	1,280	1,080	540,000	500
Fir engraver	1,364	316,920	522,729	78,409,350	150
Mountain pine beetle (L)	371	184,210	674,180	47,192,600	70
Mountain pine beetle (S)	1	40	5	7,500	1,500
Mountain pine beetle (W)	223	101,360	410,209	205,104,500	500
Mountain pine beetle (P)	355	55,640	82,493	4,124,650	50
Western pine beetle	410	45,250	14,723	14,723,000	1,000
Oregon total	3,149	739,040	1,716,202	359,442,600	...
Washington:					
Douglas-fir beetle (westside)	175	39,070	56,591	56,691,000	1,000
Douglas-fir beetle (eastside)	288	42,110	69,457	55,565,600	800
Engelmann spruce beetle	88	24,660	40,718	20,359,000	500
Fir engraver	174	41,150	60,406	9,060,900	150
Mountain pine beetle (L)	11	1,990	27,975	1,958,250	70
Mountain pine beetle (W)	280	48,040	63,901	31,950,500	500
Mountain pine beetle (P)	74	12,930	130,258	6,517,900	50
Western pine beetle	33	14,250	4,187	4,187,000	1,000
Silver fir beetles	24	5,010	2,533	1,773,100	700
Washington total	1,147	229,210	456,226	188,063,250	...
Regional total	4,296	968,250	2,172,528	547,505,850	...

[1] Mountain pine beetle infestations are separated by tree species: L, lodgepole pine; S, sugar pine, W, western white pine; P, ponderosa pine.

[2] Mortality occurred on all ownerships. The amount salvaged will depend upon land classification, accessibility, and other conditions.

MINOR FOREST PEST PROBLEMS

PONDEROSA PINE TERMINAL FEEDERS

A complex of ponderosa pine terminal feeders has been tentatively identified as a gouty pitch midge, *Cecidomyia* sp., ponderosa pine tip moth, *Rhyacionia zozana* (Kearfott); and an unidentified pine weevil. This group of insects caused heavy terminal and lateral twig damage in a 10-year-old ponderosa pine plantation near Keno, Oregon. Damage is expected to be significant in many areas in southern Oregon.

GRASSHOPPERS, *Melanoplus sanguinipes* (Fabricius), *Camnula pellucida* (Scudder), and *Cratypedes neglectus* (Thomas).

Ponderosa pine seedlings and small saplings were defoliated at several localities. Damage was severe enough on a private tree farm near Klickitat, Washington to warrant control. The owner sprayed the area with malathion to prevent serious losses. Similar feeding occurred on the Colville Indian Reservation but was not controlled. In Oregon, grasshoppers caused light defoliation on a young ponderosa pine plantation on the Applegate District, Rogue River National Forest. Control was not necessary.

SAWFLIES, *Neodiprion* spp.

Light to heavy defoliation resulted on several thousand acres of knobcone pine on the Siskiyou National Forest in southwest Oregon. Another species caused light defoliation of true firs on the Winema National Forest in southern Oregon. Neither of these two species of sawflies are expected to cause serious tree damage next year.

NEEDLE CAST DISEASE OF PINES

The range of the yet unidentified needle disease on ponderosa pine in southern Oregon has now been found in 18 plantations on the Umpqua National Forest and one plantation on the Willamette National Forest. The damage potential of this disease is unknown.

PORIA ROOT ROT

The root rot, *Poria weirii*, was found to be widely scattered throughout the Tillamook Burn in young Douglas-fir. Losses associated with this disease will probably continue to increase at a slow rate.

WINTER DAMAGE

A noninfectious disease, identified as winter damage or red belt caused widespread damage east of the Cascades in Oregon and Washington during the spring of 1969. The damage occurred primarily on the south and west slopes between 3,000 and 5,000 feet elevation. It extended from Sisters, Oregon to Wenatchee, Washington and from the Cascade Mountains to the Idaho State line. The heaviest damage occurred on the Hood River District, Mount Hood National Forest, where some tree mortality resulted.

The damage is related to a climatic phenomenon that occurs after a period of extreme cold weather, followed by a sudden increase in temperatures that is often accompanied with drying winds.

A SCOLYTID BEETLE, *Dryocoetes* sp.

This beetle caused light to moderate tree killing in subalpine fir stands on the Sullivan Lake District of the Colville National Forest, Washington.

BLACK-HEADED BUDWORM, *Acleris variana* (Fern.)

Very low populations of this common defoliator were found on true firs and Engelmann spruce near Mt. Adams Lake on the Yakima Indian Reservation in Washington. The trend of the outbreak is unknown.

DYING HEMLOCK

The dying of old growth western hemlock from undetermined causes continued in Washington, but at a reduced rate. Areas where the most mortality resulted were on the Olympic Peninsula and the Mt. Baker National Forest. The continuing downward trend in dying hemlock is in a large part due to the accelerated harvesting of the overmature western hemlock stands.

TREES DAMAGED BY BEARS

The problem of bears damaging pole- and sapling-size Douglas-fir and western hemlock was low throughout the Region. In Oregon widely scattered, small groups of trees were killed on the Mt. Hood, Siuslaw, and Willamette National Forests and the Northwest Oregon District. Damage was more severe in Washington, but less than that suffered in previous years. Light to heavy damage was reported on the Gifford Pinchot, Snoqualmie, and Olympic National Forests and on the Southwest Washington District.

OTHER INSECT PROBLEMS

The following list of insects caused varying degrees of damage to forest and shade trees. Much of the information has been compiled from reports supplied by the States' agricultural entomologists and extension officers. These insects are of a more general interest and are listed here as a record since they pose little threat to forest resources.

WESTERN TENT CATERPILLAR, *Malacosoma californicum pluviale* (Dyar)

Light to heavy feeding was recorded in many alder stands in northwest Oregon.

FALL WEBWORM, *Hyphantria cunea* (Drury)

Larval feeding was heavy and more general than in 1968, particularly in the Willamette Valley and along the Columbia Gorge in Oregon.

OMNIVOROUS LEAF TIER, *Cnephasia longana* (Haworth)

An outbreak of this pest was found in a Douglas-fir Christmas tree plantation in Clackamas County, Oregon. Damage to the trees was light to heavy.

A PLANT BUG, *Tropidosteptes pacificus* (Van Duzee)

This insect caused defoliation of ash trees in a nursery in Portland, Oregon.

PINE NEEDLE SCALE, *Phenacaspis pinifoliae* (Fitch)

This insect is reported to have caused browning and death of some ornamental pines near Waterville, Washington. These outbreaks generally subside within a few years.

SATIN MOTH, *Stilpnotia salicis* (Linn.)

Larvae were heavy on cottonwood and willow near Enterprise, Oregon; some trees were almost completely defoliated.

A PINE NEEDLE-SHEATH MINER, *Zelleria haimbachi* Busck

Heavy damage occurred in several Christmas tree plantings in Clackamas and Multnomah Counties, Oregon. Severe damage was observed in native ponderosa pines at Medford, Oregon. Injury was also common on lodgepole pine in Washington near Chehalis and Olympia.

SMALLER EUROPEAN ELM BARK BEETLE, *Scolytus multistriatus* (Marsh.)

Several larvae and adults were collected from an elm tree in The Dalles, Oregon. This is the first time the insect was found in Wasco County. This beetle is a principal vector of the Dutch elm disease (*Ceratocystis ulmi*). The disease has not yet been detected in Oregon and Washington. However, it has been found in Boise, Idaho.

PINE WEEVILS, *Scythropus* sp.

Numerous *Scythropus* adults were feeding on ponderosa pine needles in a forest plantation near Elgin, Oregon. They bite chunks out of the leaf margin leaving a saw-toothed edge. Damage generally is not serious to trees.

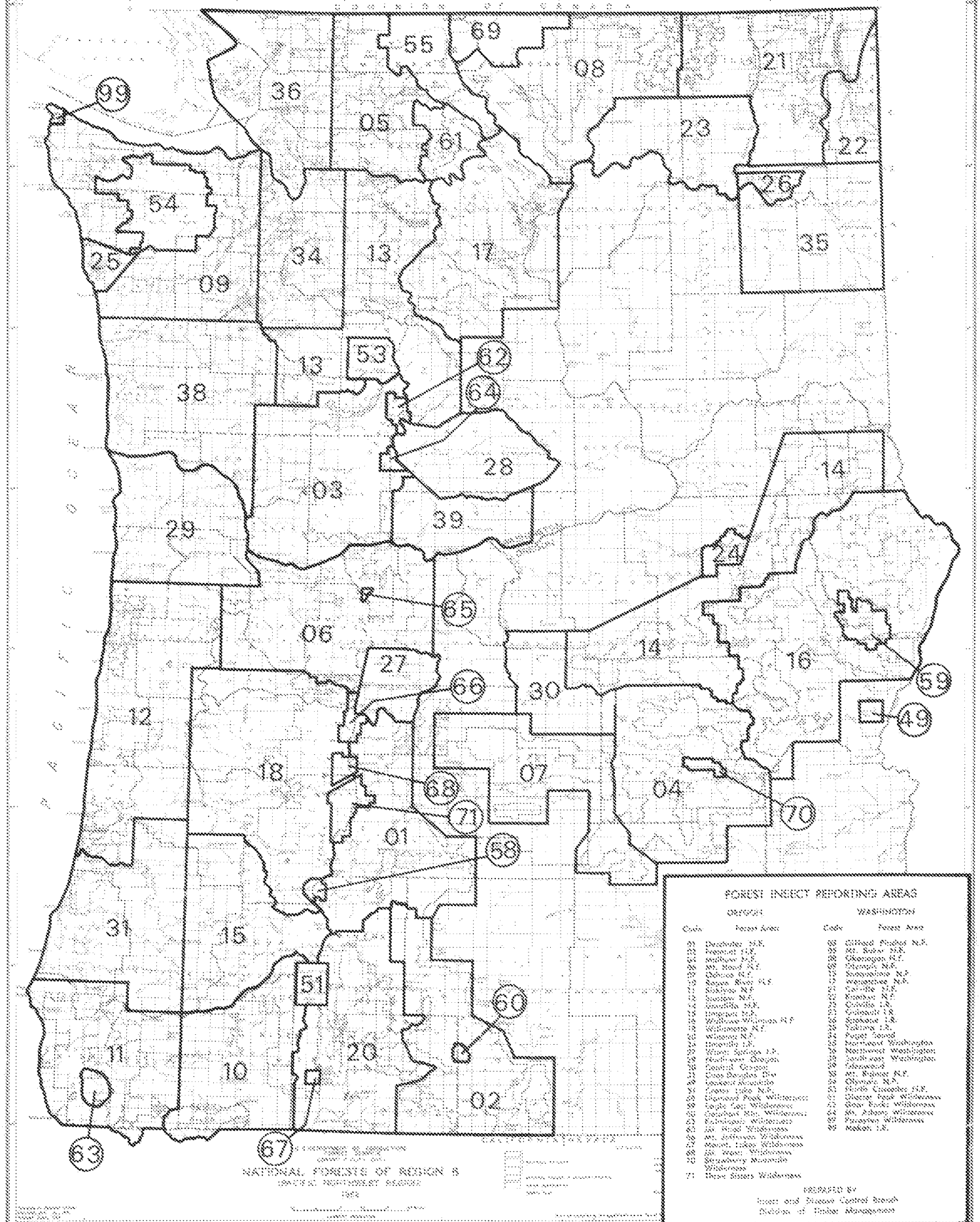
Magdalis sp. adults caused spectacular defoliation to a young pine stand on the Fremont National Forest, Oregon. No lasting damage is expected.

A SCALE INSECT, *Matsucoccus* sp.

A very light population was detected on ponderosa pine on the Mt. Hood National Forest near Pine Grove, Oregon. The injury associated with this pest is twig dying and flagging.

A PINE WEBBING SAWFLY, *Acantholyda* sp.

This insect was collected in several ponderosa pine plantations in southwest Oregon. This pest feeds on the needles and forms a large loose silk web that is filled with frass and needle fragments.


99
36
55
69
08
21
05
61
23
22
54
26
25
34
13
17
35
09
13
53
62
38
64
28
14
03
39
29
24
65
06
14
27
16
66
30
59
12
49
18
07
04
68
70
71
01
58
31
15
51
60
11
10
20
02
63
67
PACIFIC OCEAN
FOREST INSECT REPORTING AREAS
OREGON
Code
Forest Area
WASHINGTON
Code
Forest Area
NATIONAL FORESTS OF REGION 6
PREPARED BY
Insect and Disease Control Branch
Division of Timber Management

GPO 996-728